

## WHAT IS CLAIMED IS

1. A method of utilizing ribonucleic acid as markers for product anti-counterfeit labeling and verification. The said method is to preserve ribonucleic acid in a medium and label the said medium onto or into objects for authenticity. The said medium can also be mixed directly with liquid or solid for labeling. For authenticity check, a recovery method with solvent and subsequent PCR amplification method is used to check the composition of the ribonucleic acid.
2. The method of claim 1 wherein said ribonucleic acid can be ribonucleic acid (RNA) or deoxyribonucleic acid (DNA).
3. The method of claim 1 wherein said ribonucleic acid can be animal, plant, bacterial, fungus, or virus origin or synthesized vector or fragments.
4. The method of claim 1 wherein said medium refers to materials inert and not deteriorous to the objects being labeled.
5. The method of claim 1 wherein said medium refers to polymers which are miscible with ribonucleic acid.
6. The method of claim 5 wherein said polymer can be acrylic or plastics.
7. The method of claim 1 wherein said liquid or solid can be ink, glue, or polymers.
8. The method of claim 7 wherein said liquid can be oil-based or water-based.
9. The method of claim 7 wherein said glue can be oil-based or

water-based.

10. The method of claim 7 wherein said polymers can be acrylic or plastics.

11. The method of claim 1 wherein said recovery method refers  
5 to utilizing organic or inorganic solvent for extraction.

12. The method of claim 11 wherein said organic solvent can be buffer, benzene, characin, alcohol, acetone, or chloroform.

13. The method of claim 11 wherein said inorganic solvent can be water.

10 14. The method of claim 12 wherein said buffer can be phosphate-based buffer.

15 15. The method of claim 1 wherein said PCR method can be single or multiple nested PCR.

20

25